

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Algebra 1B Pd: \_\_\_\_\_

**Weekend Word Problem #11: Polynomial Geometry**

**The Situation:** The Minaj family is planning to build a rectangular pool with a length that is the square of its width.

1. Choose a variable for the width of the pool.

2. Write an expression for the length of the pool using your variable from #1.

3. Sketch the pool below. Label the length and the width with your expressions from #1 and #2.

4. Write a simplified expression in standard form for the *perimeter* of the pool.

5. Name that polynomial! (From #4)

6. The Minajs decide that they want the width of the pool to be eight feet. What will the perimeter of their pool be, in feet?

7. Describe your problem solving process. Write at least TWO QUALITY COMPLETE SENTENCES using algebraic terms..

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8. *(You must at least try the)* **CHALLENGE:** The Minajs now aren't sure they want the width to be eight feet long, and want to add a four foot tile border around their pool. Write a simplified expression in standard form for the perimeter of the border and the pool combined, using your expressions from #1 and #2.

